

*REMARKS/ARGUMENTS**Present Invention and Pending Claims*

The present invention relates to a polyester composition and a polyester packaging material made therefrom. Claims 33 and 39-89 are pending.

Amendments to the Claims

Claim 33 has been rewritten in independent form. Claims 34-38 have been canceled and reintroduced as independent claims 47, 54, 63, 72, and 79, respectively. As a result of the amendments to claims 33-38 (now claims 33, 47, 54, 63, 72, and 79), claims 1, 2, and 4 have been canceled as superfluous.

Claims 3, 5, 6, 8-16, 18, 19, 21, 22, 24, 25, 27, 28, 30, and 31 have been canceled and rewritten as new claims 39-46, 48-53, 55-62, 64-71, 73-78, and 80-87. New claims 39-46, 48-53, 55-62, 64-71, 73-78, and 80-87 also are supported by the specification. New claims 88 and 89 have been added and are supported by the specification at, for example, page 41, line 21, through page 42, line 6, and Examples 14 and 15. Because (i) new claims 39-87 are substantial duplicates of original claims 3, 5, 6, 8-16, 18, 19, 21, 22, 24, 25, 27, 28, 30, 31, and 34-38 and (ii) new claims 88 and 89 are combined versions of claims 33-35 and 36-38, respectively, no new search is required. Applicants believe that the application is now in condition for allowance. If, however, the application is not deemed to be in condition for allowance, Applicants request that the above amendments be entered for the purposes of placing the case in better condition for appeal. No new matter has been added by way of these amendments.

Information Disclosure Statement

While the Office acknowledged receipt of the Information Disclosure Statement that was filed on May 6, 2008, references AN (JP 49-38950), AP (JP 49-53943), and AQ (JP 51-25065) were crossed out, and the Office did not acknowledge their consideration. Although these references are not in English, Applicants submitted English abstracts for these references. The Office Action did not provide a reason why the references were not considered. Applicants note, however, that reference AM (U.S. Patent 3,872,055) is a

counterpart of each of the crossed out references. Reference AM was indicated as considered by the Office.

Summary of the Office Action

Claims 1-6, 8-16, 18, 19, 21, 22, 24, 25, 27, 28, 30, 31, and 33-38 stand rejected under 35 U.S.C. § 103(a) as obvious over EP 1 239 008 (Takashima et al.) ("the '008 application") or U.S. Patent 6,733,853 (Takashima et al.) ("the '853 patent") in combination with U.S. Patent 6,129,961 (Sonoda et al.). Reconsideration of the pending claims is hereby requested.

Discussion of the Obviousness Rejections

A. The '008 Application and the '853 Patent

The pending claims stand rejected as allegedly obvious over the '008 application or the '853 patent in combination with Sonoda et al. Both Takashima references allegedly disclose polyester-based resin compositions comprising a blend of 3-40% by mass of a polyamide resin (A) and 97-60% by mass of a polyester (B). The Examiner concedes that the Takashima references do not explicitly disclose that the fine powder content is 1,000 ppm or less. Sonoda et al. allegedly discloses that polyesters with a low fine powder content can form articles with good transparency. According to the Examiner, it would have been obvious to combine the disclosure of the Takashima references with the disclosure of Sonoda et al. with the motivation of preparing a polyester composition that provides end products with good transparency.

With respect to the claimed amounts of 0.1 to 2 parts (claims 63-87 and 89) or 3 parts (claims 33-62 and 88) by weight of polyamide per 100 parts by weight of polyester, the Office maintains that these amounts are *prima facie* obvious over the disclosure of 3.1 parts by weight in the Takashima references given the similarities of these values.

The pending claims have been amended to recite that the content of the partially aromatic polyamide is 3 parts by weight (independent claims 33, 47, 54, and 88) or 0.1 to 2 parts by weight (independent claims 63, 72, 79, and 89) per 100 parts by weight of the thermoplastic polyester.

The present inventive compositions seek to provide excellent transparency, thermal stability, and flavor retention when used as a packaging material. Since the polyester has low compatibility with the partially aromatic polyamide, haze increases with the increasing content of the partially aromatic polyamide in the composition (see specification at, for example, page 47, lines 3-11). That is, the inclusion of polyamide improves the flavor retention, but tends to deteriorate the transparency. In order to provide superior transparency and flavor retention, Applicants have discovered that the polyester and partially aromatic polyamide need to be within the claimed ranges.

Applicants also have discovered that the haze can be reduced to 20% or less by regulating the amount of the partially aromatic polyamide, the antimony content in the polyester composition, the content of phosphorus atom, and/or the content of fine powder (see specification at, for example, page 47, lines 11-16). It is the control of these various elements *in combination* which provide a composition that can be used as packaging material with superior characteristics.

Thus, even if the '008 application or the '853 patent discloses a lower limit of 3.1 parts by weight and discloses a certain antimony content and phosphorus content, the present invention still cannot be considered obvious in view of these references because the requisite disclosure concerning *the combination* of elements within certain ranges does not exist, even from the combination of the cited references. For example, if one were to take Example 6 of the '008 application (paragraph 0054) or the '853 patent (col. 11, lines 35-47) and modify the polyamide content to 2 wt%, a composition with superior transparency, thermal stability, and flavor retention will *not* be provided. More specifically, because there was no phosphorus content (0 ppm) in Example 6, the modified composition in the hypothetical example will have insufficient thermal stability (see, e.g., the specification at page 45, lines 12-23).

The '008 application and the '853 patent also do not teach or recognize the importance of the alkali metal content (as disclosed in the present application at, for example, page 43, line 24, through page 44, line 10).

All of the pending claims require that the content of the partially aromatic polyamide is either 3 parts by weight or up to 2 parts by weight per 100 parts by weight of the thermoplastic polyester. As previously discussed, the Takashima references disclose a

composition comprising 3.1 parts by weight of polyamide per 100 parts by weight of the thermoplastic polyester. The Takashima references teach away from adding amounts *lower* than 3.1 parts by weight, since it was found that amounts higher than 3.1% by mass (e.g., 5-35% by mass) improved the gas barrier properties and stabilized the moldability of the resin composition ('008 application, paragraph 0027; '853 patent, col. 6, lines 41-46).

In response, the Office notes that a preferred embodiment does not teach away from the entire disclosure of a reference (page 4, first paragraph of the Office Action). But a reference must be considered for all of its teachings, and the '008 application and the '853 patent teach that improved gas barrier and moldability properties were observed with amounts of polyamide higher than 3.1% by mass (e.g., 5-35% by mass). Moreover, the '008 application and the '853 patent describe that "[t]he shaped article and the packaging container of the present invention are excellent in gas barrier properties and highly clear in its appearance with little darkening" ('008 application, paragraph 0037; '853 patent, col. 9, lines 4-8). The '008 application and the '853 patent further describe that the darkening results from the deposition of antimony metal despite the blending of a polyamide resin ('008 application, paragraph 0033; '853 patent, col. 8, lines 9-19). Therefore, upon reading the '008 application or the '853 patent, one of ordinary skill would glean that improved gas barrier and moldability properties could be attained by having a polyamide content of 3.1% by mass *or higher* and increased clarity by controlling the deposition of antimony. Moreover, as conceded by the Office, neither the '008 application nor the '853 patent discloses a polyester composition comprising a fine powder content of 1,000 ppm or less. Thus, one of ordinary skill would not be motivated to adjust (i) the partially aromatic polyamide content to either 3 parts by weight or an upper limit of 2 parts by weight per 100 parts by weight of the thermoplastic polyester or (ii) the fine powder content to 1,000 ppm or less.

Because one of ordinary skill would know from the '008 application or the '853 patent that clarity can be controlled by minimizing deposition of antimony, one of ordinary skill would not find the need to seek out a reference in addition to the '008 application or the '853 patent to determine a way to adjust the haze of the packaging. Moreover, one of ordinary skill would not appreciate the need to adjust the fine powder content of the composition to 1,000 ppm or less. As a result, and contrary to the Office's assertion (page 2, item 2 of the Office Action), one of ordinary skill would *not* be led to the disclosure of

Sonoda et al. Since one of ordinary skill would not be led to the disclosure of Sonoda et al., one of ordinary skill also would not have been motivated to combine the disclosure of Sonoda et al. with the disclosures of the Takashima references, let alone with the result that the fine powder content of the composition of the Takashima references would be adjusted to 1,000 ppm or less.


Thus, it cannot be said that the combination of the Takashima and Sonoda et al. references would cause one of ordinary skill to recognize or appreciate a benefit of providing a composition with *combined* amounts of the partially aromatic polyamide, alkali metal atom, phosphorus atom, and/or fine powder *in particular amounts* as recited in the pending claims and as discovered by Applicants. Since there is no motivation to seek out the disclosure of Sonoda et al. and combine its disclosure with the disclosures of the '008 application and/or the '853 patent, the present invention, as defined by the pending claims, is not obvious in view of the combination of the cited references.

In view of the foregoing, Applicants respectfully request that the obviousness rejections over the '008 application and the '853 patent in view of Sonoda et al. be withdrawn.

Conclusion

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,


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